REMARKS/ARGUMENTS

Reconsideration of the above-identified application is respectfully requested. Claim 8 has been amended to change its dependency from claim 7 to claim 6. Claims 6, 7, and 9-18 remain as previously presented.

Claims 6-12, 14-15 and 17 stand rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2 and 5 of U.S. Patent No. 6,679,080. It is the Examiner's opinion that although the conflicting claims are not identical, the conflicting claims are not patentably distinct from each other because they disclose the claimed elements. Additionally, Claims 6-18 stand rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1-2 and 5 of U.S. Patent 6,679,080, in view of Brooks, U.S. Patent 4,326,390, and Cur et al., U.S. patent 5,157,941. It is the Examiner's opinion that claims 1-2 and 5 disclose substantially all elements of claims 6-18 except for a refrigerated temperature of 32 degrees F and a draw through flow of air circulation through the evaporator. The Examiner cites Brooks as teaching the use of a refrigeration compartment maintaining a temperature between 33 to 35 degrees F in a refrigerator at column 3, lines 1-3 and the abstract. The Examiner cites Cur et al. as teaching the use of a draw through air flow circulation through an evaporator 24 in a refrigerator by a fan 38 in Figure 5 thereof.

Applicants respectfully submit that claims 6-12, 14-15 and 17 are patentably distinct over claims 1-2 and 5 of U.S. Patent No. 6,679,080. Claims 1-2 and 5 of the '080 patent are in some respects of narrower scope than the claims pending in the present application. Additionally, Applicants respectfully submit there is no teaching in Brooks that would lead one skilled in the art to operate a refrigerated merchandiser having a high pressure drop evaporator in an environment wherein frost formation in the evaporator is likely, i.e. at a temperature in the range of 33 to 35 degrees F, which would be contrary to the conventional wisdom at the time of Applicants' invention.

Nonetheless, in view of the fact that the subject application is a continuation of U.S. patent application 09/849,209 upon which the '080 patent has issued, both the '080 patent and any patent that may issue on the subject application will have the same statutory term expiration date of May 4, 2021, and are commonly owned, a terminal disclaimer is submitted herewith to obviate these double patenting rejections.

Claims 6-11, 13-14, 16 and 18 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Renard, U.S. Patent 5,502,979, in view of Kutscher et al., U.S. Patent 6,378,605. The Examiner cites Renard as disclosing a refrigerated display cabinet comprising an insulated cabinet 50 defining a product display area/shelves 1 maintained in a refrigeration condition at a temperature above 32 degree F and having a compartment 37 separate from the product display area 1 with an evaporator 28 disposed in the compartment 37; at least one air circulator 29 disposed within the compartment 37 in cooperative relationship with the evaporator 28; and an air circulation circuit (23-26) connecting the product display area 1 and in direct flow communication with the compartment 37. The Examiner concludes that Renard discloses the invention substantially as claimed, but concedes that Renard does not disclose a relatively high airside pressure drop evaporator. The Examiner cites Kutscher et al. as teaching the use of a high airside pressure drop heat exchanger 10 with a fin density ranging from 3 fins to 10 fins per inch in a heat exchanging system for the purpose of controlling pressure drop. The Examiner also cites Kutscher et al. as disclosing a draw through flow by the action of fan 12, referring specifically to Figure 1 and column 12, lines 31-67. It is the opinion of the Examiner that it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the refrigerated display cabinet of Renard in view of Kutscher et al. such that a high airside pressure drop heat exchanger with a fin density ranging from 3 to 10 fins per inch could be provided in order to run a refrigeration system. Applicants respectfully traverse this rejection.

The Examiner's response to Applicants' Remarks filed 12/16/2005 with respect to the prior rejection of claims 6-11, 13-14, 16 and 18 has been considered. Applicants respectfully resubmit that Kutscher et al. can not be read by one having ordinary skill in the art to teach providing a relatively high air side pressure drop evaporator as taught by Applicants in a medium temperature refrigerator and recited in independent claims 6, 9 and 10. Kutscher et al. teach (see column 5, lines 53-58) enhancing the heat transfer coefficients of a fin and tube heat exchanger by increasing the gas side heat transfer coefficient and minimizing the gas side pressure drop. At column 12, lines 31-47, Kutscher et al. indeed discuss the dependence of pressure drop on fin density, stating:

> "Generally, there is a preferred fin density that should be utilized to minimize overall pressure drop by widening the channels and reducing channel pressure drop, but as discussed earlier, many different fin densities can be used to practice the invention. In

> one embodiment, the fin density is between 3 fins and 10 fins per inch and, for the prototype tested by the inventors, about 7 fins, per inch to obtain a high heat transfer surface area. In another preferred embodiment, a lower fin density, i.e. less than 3 fins per inch, is employed top reduce pressure drop by widening the channels and reducing channel pressure drop."

At the time the invention was made, the accepted practice in medium temperature refrigerated merchandiser design was to use a relatively low fin density evaporator, i.e. typically from 2 to 4 fins per inch, in view of the desire for low air-side pressure drop to minimize fan power requirements and the fact that frost build-up will generally occur in operation of medium temperature refrigerated merchandisers. Only Applicants teach using a relatively high air-side pressure drop evaporator in such an application to more evenly distribute air flow through the evaporator. Applicants respectfully submit that one having ordinary skill in the art would have been led, at the time the invention was made, by Kutscher et al. to select the low fin density embodiment of the heat exchanger Kutscher et al., in accord with the conventional wisdom of desiring a low pressure drop and wide fin spacing for frosting applications. There is no teaching in Kutscher et al. that would have led one designing a medium temperature refrigerated merchandiser to go against the conventional wisdom at the time of the invention and instead select a high fin density embodiment of the heat exchanger of Kutscher et al. provides a high airside pressure drop evaporator. Accordingly, Applicants respectfully submit that one skilled in the art on the time of the invention, applying the teachings of Kutscher et al. to Renard would select an evaporator having a wider fin spacing and no higher, and most likely, lower pressure drop than the original Renard evaporator. A lower air side pressure drop would certainly not improve air flow uniformity. Accordingly, Applicants respectfully request that the Examiner withdraw the rejection of claims 6-11, 13-14, 16 and 18 under 35 USC 103(a) as being unpatentable over Renard, U.S. Patent 5,502,979, in view of Kutscher et al., U.S. Patent 6,378,605.

Claims 12, 15 and 17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Renard, U.S. Patent 5,502,979, in view of Kutscher et al., U.S. Patent 6,378,605, and further in view of Navarro, U.S. Patent 6,145,327. The Examiner concludes that Renard in view of Kutscher et al., as applied to claims 6, 9 and 10 above, discloses the invention substantially as claimed, but concedes that Renard in view of Kutshcer et al. does not disclose a plurality of fans. The Examiner cites Navarro as

teaching the usė of a plurality of fans 16 along an evaporator coil 17 in a refrigerated case for the purpose of running a refrigeration system, referring specifically to Figure 7. The Examiner concludes that it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the refrigerated display cabinet of Renard in view of Kutscher et al. and further in view of Navarro such that a plurality of fans could be provided in order to run a refrigeration system.

Applicants admit that Navarro discloses a refrigerated display case having a plurality of fans. However, Navarro does not teach, disclose or even suggest the use of a plurality of fans in combination with a relatively high air side pressure drop evaporator, as taught by Applicants. Nor does Navarro recognize the advantage of using a plurality of fans in combination with a high air side pressure drop as taught by Applicants. The use of a plurality of fans in conjunction with a high air side pressure drop evaporator results in a more uniform distribution of air flow through the evaporator. Applicants respectfully submit that there is no teaching or disclosure in Navarro, taken alone or in combination with Kutscher et al., that would lead one having ordinary skill in the art to replace the finned evaporator/air circulation fan assembly of Renard with a plurality of fans in association with a high air side pressure drop evaporator as taught by Applicants. Applicants respectfully request that the Examiner withdraw the rejection of claim 12, 15 and 17 under 35 USC 103(a) as being unpatentable over Renard, U.S. Patent 5,502,979, in view of Kutscher et al., U.S. Patent 6,378,605 and further in view of Navarro, U.S. Patent 6,145,327.

In view of the terminal disclaimer submitted herewith and the arguments presented herein, Applicants respectfully request that the Examiner reconsider all rejections of the claims as now presented, and upon reconsideration withdraw all rejections of now pending claims 6-18, and pass claims 6-18 to allowance.

If the Examiner wishes to expedite disposition of the above-captioned patent application, he is invited to contact Applicant's representative at the telephone number below.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 03-0835.

Respectfully submitted,

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